11/20/90

UNESCO Workshop
on

"Lipid-soluble Antioxidants in Biochemistry of Nutrition and Environmental Health"

Organized by UNESCO Global Network for Molecular and Cell Biology (NMCB) and Confederation of Scientific and Technological Associations of Malaysia (COSTAM)

Organizing Committee:
L. Packer (Berkeley)
A. Azzi (Bern)
K. Yagi (Nagoya)
A. Ong (Kuala Lumpur)

Dates:
September 20-21, 1991
University Science Malaysia (USM)
Penang, Malaysia

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Corresponding Organizers

For information on registration and accomodations, write to Chair, Local Organizing Committee:

Correspondence should be addressed to:
Dr. Mohinder Singh
Vice President of COSTAM
c/o Ministry of Science,
Technology and Environment
Wisma Sime Darby
Jalan Raja Laut
50662 Kuala Lumpur
MALAYSIA
Fax: 60-3-2936006

For information on the Scientific Program, write to:

Dr. Lester Packer
Dept. of Molecular and Cell Biology
251 Life Science Addition
University of California
Berkeley, California 94720
U.S.A.
Tel: (415) 642-1872
Fax:(415) 642-8313

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Schedule of Sessions

Thursday 19 September

Arrival

Day 1: Friday, 20 September

8:30AM	-	12:00PM	Lectures - Topics in IA
2:00PM	-	5:00PM	Lectures - Topics in IB
5:00PM	-	6:00PM	Roundtable discussion #1 (Topics in IIIA)
6:00PM	-	7:00PM	Posters

Day 2: Saturday, 21 September

8:30AM	-	12:00PM	Lectures - Topics in IIA
2:00PM	-	3:30PM	Lectures - Topics in IIB
3:30PM	-	5:00PM	Roundtable discussion #2 (Topics in IIIB)

Day 3: Sunday, 22 September

Poster Discussion

Concluding Session

Departure

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TOPICS

I. Lipid-Soluble Antioxidants - Natural Products and Sources; biological activity
   1. Vitamin E [Tocopherols and tocotrienols]
   2. Carotenoids, vitamin A, and retinoids
   3. Ubiquinone [Coenzyme Q]
   4. Lipoic Acid and other Thiol Antioxidants
   5. Flavonoids, Gossypol and Other Phenols, Ellagic Acid
   6. Antioxidants and Dietary Fats

II. Lipid-Soluble Antioxidant Nutrition and Biochemistry - Aging and Degenerative Diseases

   A) Epidemiological studies
   B) Clinical applications

III. Topics for Round Table Discussion of I and II:
   1. Interventions - Synthetic Antioxidants and Biological Response Modifiers

   A) Antioxidant therapy to reduce free radical damage
   B) Biological response modification
      Arachidonic acid cascade
      Protein kinase C and secondary messengers
      Modulation of activities in membranes, plasma, lipoproteins, and other hydrophobic environments

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TENTATIVE LIST OF PARTICIPANTS

I. Lipid-Soluble Antioxidants - Natural Products and Sources; Biological Activity

1. Vitamin E [Tocopherols and tocotrienols]

Y.H. Chong (Kuala Lumpur): Tocotrienols

Roger Dean * (Sydney): Cell Mediated Oxidation of Lipoproteins

Manfred Dunker (LaGrange)

G. Luc and Fruchart: Lipoprotein Oxidation

Kenji Fukuzawa (Tokushima, Japan)

Abdul Gapor (Kuala Lumpur):

G. Govil (Bombay): Physical Chemical Studies of Vitamin E

Midori Hiramatsu (Okayama):

Valerian Kagan (Sofia): Antioxidant Recycling of Chromanoxyl Radicals

Fumio Katsutani (Nagoya):

Kanki Komiyama (Tokyo): Antitumor and Antioxidant Effects of Alpha- and Gamma-Tocotrienols

Yuen May Choo(Kuala Lumpur):

Author to be chosen: Familiar Vitamin E Deficient Syndrome

Kalanithi Nesaretnam (Kuala Lumpur): Protective Effect of Tocotrienols on Chemically Induced Carcinogenesis in Rats

Etsuo Niki (Tokyo):

Lester Packer (Berkeley): Biological Activity of Tocopherols and Tocotrienols

Asaf Qureshi (Madison): The Multitherapeutic Properties of Cereals, Their Oils and Minor Components (Tocotrienols) in Avian and Mammalian Systems

Daniel Tan (Kuala Lumpur):

M.K. Tech (Kebangsaan):

Isao Tomita (Shizuoka): Role of Vitamin E in the Protection of Oxidative Degeneration ofLDL

Fulvio Ursini (Padua): Synergistic Effect of Lipid Hydroperoxyl Radical Scavenging and Lipid Hydroperoxide Reduction in the Inhibition of Lipid Peroxidation in Biomembranes

Takanori Yokota (Tokushima):

Susumu Yukawa (Yokahama): Lipoprotein Metabolism

Prapon Wilairat (Bangkok): Hypocholesterolemic Effect of Vitamin E

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* Underlined names signify speakers

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Lian-zhen Zhu (Beijing): Difference of Antioxidant Effect Between Vitamin E and Selenium

2. Carotenoids, vitamin A, and retinoids

Louise Canfield (Tucson): Metabolism of Carotenoids by Enzymes of Oxygen Metabolism

T.P.A. Devasagayam (Bombay): Synthetic Carotenoids: Casorubins and Dicarbonyl Polyenes as Singlet Oxygen Quenchers

M. Nishino (Tokyo): The Anti-Tumor and Anti-Tumor Promoting Activity of β- and α-Carotene

James A. Olson (Ames): Vitamin A and Carotenoids

Helmut Sies (Dusseldorf): Vitamin E, Carotenoids, and the Glutathione System

Pablo A. Scolnik (Wilmington): Biochemistry and Molecular Genetics of Carotenoids in Bacteria, Fungi, and Plants. Applications to Xerophthalmia

3. Ubiquinone [Coenzyme Q]

Author to be chosen: Ubiquinone$_{10}$ (Coenzyme Q_{10})

Hisashi Kawasaki (Hiroshima): Lipid-soluble Antioxidants (CoQ and Vitamin E) and Prevention of Tissue Damage

Kiyozou Morita (Jikei)

Hirose Nakasawa (Tokai)

Donald Reed (Corvallis): Chemically Induced Alterations in Vitamin E Levels In Vitro and In Vivo

Roland Stocker (Sydney): Ubiquinol Antioxidant Actions

Shimichi Takaki (Osaka)

Nabaru Yamasaki (Japan)

Christine Winterborne (Christ Church)

4. Lipoic Acid and Other Thiol Antioxidants

Jurgen Fuchs (Frankfurt)

Lester Packer (Berkeley)

C. Channa Reddy (College Park)

Helmut Sies (Dusseldorf)

Elena Serbinova (Berkeley)

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5. Flavonoids, Gossypol and Other Phenols, Ellagic Acid

Wolf Bors (Munich): Rate Constants for Antioxidant Activity and Use of the Crocin Assay

H.M. Dani (Chandigarh): Inhibition of Lipid Peroxidation and Microsomal Degranulation by Plant Flavonoids as an Index to their Anticarcinogenic Potentials

Nagaratnam P. Das (Singapore): Studoes on Flavonoids and Related Compounds as Antioxidants in Food

Barry Halliwell (London)

Lawrence Machlin (Nutley)

Peter Maybry (Austin): **or** John Harborne (Reading)

Toshihiko Osawa (Nagoya): Plant Phenolic Antioxidants and Antimutagens

6. Antioxidants and Dietary Fats

Nutrition of Vitamin E and Dietary Fats

Regine Kahl (Gottingen): Butylated Hydroxytoluene Toxicology

O. Korver (Vlaardingen): Plant Oils - Nutrition and Safety

Sompool Kritalugsana (Bangkok)

Barbara Pence (Lubbock): Dietary Fat Effects on Antioxidant Status in Target Tissues

Michihiro Sugano (Kyushu): Nutrition of Trienols and Lipid Metabolism

Michael Wargovich (Houston): Naturally Occurring Lipid-Soluble Organosulfur Compounds from Garlic: Chemoprevention and Radioprotective Effects in Animals

II. Lipid-Soluble Antioxidant Nutrition and Biochemistry-Aging and Degenerative Diseases

A. Epidemiological studies

Nubia Munoz: Intervention Trials with Vitamins for Oesophageal Cancer

Gerald Combs (Ithaca, NY): Nutrition and Cancer in Mainland China

Fred Gey (Bern): Essential Antioxidants and Stomach Cancer

Hans Stich (Vancouver): Anti-Cancer Aspects of Antioxidant Therapy in Buccal Cancer (Beetle Nut Chewers)

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Maitree Suttajit (Bangkok): Vitamin Status in Malaria

B. Clinical applications

Suvit Areekul and Yupin Boonme (Bangkok): Catalase Cells of Mice Infected with *Plasmodium*

Faik Atroshi (Helsinki): Palm Oil Vitamin E Effects in Hypercholesterinemia

Jharna Bhattacherjee (Calcutta): Erythrocytic GSH Level and Stability in *Plasmodium* Vivax Malaria

H.J. Bremer (Heidelberg): African Studies on Nutrition and Pediatric Disoders

Udom Chanharaksri (Bangkok): Platelet in Thalassemia

B.S. Das (Orissa): Plasma Lipid Peroxidation in P. Falciparum Malaria

U.N. Das (Hyderabad): Anti-Cancer Effects of Cis-Unsaturated Fatty Acids Both in vitro and in vivo

Jurgen Fuchs (Frankfurt): Vitamin E in Dermatology

Thiradyuh Glinsukon (Bangkok): Hepatic Lipid Peroxidation in Ethanol Intoxication

Michael Golden (Kingston, Jamaica): Free Radicals and Antioxidants in Kwashiorkor

N.H. Hunt (Sydney): Free Radicals and Antioxidants in Malaria

M. Li (Canton): Reactive Oxygen Species in Mice Infected or Immunized with *Plasmodium berghei*

M. Li (Canton): Kinetic Change of Amount of Malonyldialdehyde (MDA) in Sera of Mice Infected With *Plasmodium Berghei* and its Relationship With Parasiteamia and Anemia

Maruyama (Japan): AntiCancer Effects of Tocotrienols

David Mueller (London): Vitamin E Deficiency and the Nervous System

Sunan Nakornchai (Bangkok): Oxygen Free Radicals in Malaria

Thomas Odiambo (Nairobi) - Insect Physiology and Interventions

Gabriel Ogunmola (Ibadan): Human Glucose 6-Phosphatedehydrogenase Deficiency, Erythrocyte Oxidant Stress, and Malaria - Antioxidant Interventions

Phisit Phanthumachinda (Bangkok):

Wannee Rojanapo (Bangkok): Lipid Peroxidation and Cancer

L. Salako (Ibadan) - Pharmacological Interventions in Malaria

Author to be chosen: Lipid Peroxidation and Cancer

Kamp Sriwatanakul (Bangkok): Tissue Damage in Paraquat Poisoning

B. Stavrich (Ontario): Flavonoids in Foods: Their Significance for Nutrition and Health

Author to be chosen: Tissue Pathology

M.K. Teoh (Kuala Lumpur): Effects of Tocotrienols (Palm Vitee) on Patients

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with Peripheral Vascular Disease

Chaivat Toskulkao (Bangkok): Hepatic Lipid Peroxidation and Calcium Accumulation in Alcohol and Aflatoxin Hepatotoxicity

Tuomas Westermarck (Helsinki): Antioxidant Therapy in Neurological Disorders

Kunio Yagi (Gifu): Estrogen Therapy

Toshikawa Yoshikawa (Kyoto): Antioxidant Therapy in Ischemia Reperfusion Injury

Yongyuth Yuthavong (Bangkok): Oxidative Mechanism of Action of Ginghaosu: A New Antimalarial

III. Topics for Round Table Discussion of I and II:

1. Interventions - Synthetic Antioxidants and Biological Response Modifiers

A. **Antioxidant therapy to decrease free radical damage**
Identification of promising antioxidants for pre-clinical trails.

B. **Biological response modification of lipid-soluble antioxidants**
Arachidonic acid cascade, protein kinase C, secondary messengers,
modulation of activities in membranes, lipoproteins, and other hydrophobic environments

Angelo Azzi (Bern): Vitamin E and PKC Regulation

Alvin C. Chan (Canada): Vitamin E and the Arachidonic Acid Cascade

Nobuhiko Shibata (Osaka): Highly Purified Elcosapentaenoic Acid Attenuates Tissue Damage as well as Ventricular Arrythmia in Experimental Myocardial Infarction

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